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1 **REMARKS**

2 The Examiner rejected: 1) Claim 1 as indefinite under 35 U.S.C. § 112, ¶ 2; 2)  
3 Claims 1-20 under 35 U.S.C. § 103(a) as being obvious over Madnick (U.S. Patent No.  
4 5,913,214) in view of Kurz, "Data Warehousing within Intranet: Prototype of a Web-  
5 Based Executive Information System," IEEE Database and Expert Systems  
6 Applications, September 1-2, 1997, pp. 627-632; 3) Claims 1-7, 9-17, and 20 under 35  
7 U.S.C. § 103(a) as obvious over Spyglass Prism Concepts and Applications  
8 ("Spyglass"), pp. 1-7; and 4) Claims 8, 18-19 under 35 U.S.C. § 103(a) as obvious over  
9 Spyglass and further in view of Madnick.

10 Applicants have amended independent claim 1 to recite "a first network device."  
11 The Examiner's rejection under § 112 is therefore now moot. Applicants have also  
12 amended claims 1, 2, 6, 7, 8, 11, 12, 15, and 20 and respectfully submit that claims 1-  
13 20 are in condition for allowance. Applicants also traverse the rejections and  
14 respectfully request reconsideration.

15 **I. Claim Amendments**

16 Applicants have amended claims 1, 2, 6, 7, 8, 11, 12, 15, and 20 and respectfully  
17 submit that no new subject matter has been added. One focus of the present  
18 amendments relates to the substitution of the term "data mining" with "content  
19 extraction" throughout the claims. Applicants respectfully submit that the term "data  
20 mining" implies and may therefore be deemed to encompass a process of "content  
21 extraction." In addition, support for this substitution of terms may be found in the  
22 specification on pages 50-62.

23 **II. Claims 1-20 are not obvious over Madnick in view of Kurz**

24 The Examiner has retained his rejections of claims 1-20 as being obvious in of  
25 the combination of Madnick and Kurz. As argued in their April 24, 2002, Applicants  
26 respectfully submit that the Examiner has not made a prima facie case of obviousness  
27 under § 103(a) because the asserted references are not properly combinable. There is

1 no suggestion or motivation in the prior art to modify Madnick with Kurz to arrive at the  
2 claimed invention.

3 Applicants respectfully submit that the asserted combination would destroy, or at  
4 least moot, the intended function of Kurz. See *In re Gordon*, 733 F.2d 900 (Fed. Cir.  
5 1984). One of ordinary skill in the art would not have been motivated to make the  
6 asserted combination because Madnick relates to retrieving data from heterogeneous  
7 data sources including structured sources and semi-structured sources; and Kurz on the  
8 other hand relates to retrieving data in a data warehouse modeled as a virtual n-  
9 dimensional data-cube. That is, the object of Madnick is to retrieve data from  
10 heterogeneous data sources, while that of Kurz is to retrieve data from one highly  
11 structured data source. The asserted combination would therefore have had no utility  
12 and therefore no desirability. The resulting combination would be inoperable due to the  
13 inconsistent objectives and functions of the two references. The asserted combination  
14 could only have been made using improper hindsight analysis with the present invention  
15 as a roadmap. See August 27, 2001 Office Action Response.

16 The Examiner has not addressed this argument in any of the office actions. In  
17 the presently pending Final Office Action, the Examiner noted the Applicants' argument.  
18 Applicants respectfully submit however that the Examiner's response evidences a  
19 misunderstanding of the Applicants' argument. In the Final Office Action, the Examiner  
20 notes "that the patent examination process includes the test of utility, therefore, the  
21 Madnick patent has patentable utility, with results displayed in a Web browser (Kurz,  
22 Figure 4)." Applicants have not disputed the utility of Madnick or of Kurz, but rather the  
23 utility of the combination of Madnick with Kurz. Applicants note that the combination of  
24 Madnick and Kurz has not been submitted to an examination process and therefore  
25 lacks the presumption of utility noted by the Examiner for Madnick. Madnick retrieves  
26 data from disparate, heterogeneous semi-structured data sources, while Kurz retrieves  
27 data from one highly structured data source. One of ordinary skill in the art would  
28 clearly have not been motivated to combine the two.

29 In addition, Applicants respectfully submit that Madnick teaches away from any  
30 combination with Kurz. Madnick states that it "allows semi-structured data sources, . . .

1 , flat files containing data (data files containing *collections of data that are not arranged*  
2 *as a relational database*), . . . , to augment traditional, structured databases without  
3 requiring the requester to learn a new, separate query language." Madnick, col. 2, lines  
4 28-36. Kurz uses only a "relational Online Analytical Processing" database as its data  
5 source. Kurz, Abstract. Madnick therefore explicitly rejects any combination with Kurz.

6 The Examiner "applies Kurz's result page of information gathered using online  
7 analytical processing methods, to Madnick's returned data, providing a user of  
8 Madnick's data receiver the benefit of display using a familiar medium." Office Action,  
9 pg. 16, ¶ 16. Applicants respectfully submit that this is clearly hindsight analysis. There  
10 is no suggestion in Madnick (nor in Kurz) that a result page of information gathered from  
11 an n-dimensional data-cube (which is a highly-structured relational database) using  
12 online analytical processing methods would be beneficial, desirable, or even possible by  
13 employing the teachings of Madnick. This is particularly true in view of the explicit  
14 exclusion of relational databases from the types of data sources used in Madnick. See  
15 Madnick, col. 2, lines 28-36.

16 Applicants respectfully request that the Examiner's rejections of Claims 1-20 as  
17 obvious over Madnick in view of Kurz be withdrawn as based on improperly combined  
18 references.

19 **III. Claims 1-7, 9-17 and 20 are not obvious over Spyglass**

20 The Examiner has rejected claims 1-7, 9-17 and 20 as obvious over Spyglass.  
21 Independent claims 1, 15 and 20 have been amended to more particularly point out  
22 what Applicants claim as their invention. The Examiner has acknowledged that  
23 Spyglass does not teach data mining expressions or data mining conversion language.  
24 The Examiner argues that data mining expressions and data mining conversion  
25 language are suggested on page 5 of Spyglass Prism. Applicants respectfully submit  
26 that the cited passage does not teach or suggest extracting hypertext elements using  
27 data mining expressions as recited in claim 1 for content extraction. Rather, the cited  
28 passage teaches conversion rules for optimal viewing on a requesting device. For  
29 example, the cited passage states

1 Prism's Content Converter selects a set of conversion rules  
2 that define how Web content will be translated to provide  
3 optimal viewing on the requesting device. These rules pass  
4 content retrieved from the Web site through specific  
5 Conversion Routines. For example, an image conversion  
6 script for a handheld PDA may convert images to GIF,  
7 reduce the color depth, reformat the image for a 240 x 480  
8 pixel display, and remove background images and  
9 comments (sic) from the HTML document.  
10

11 Spyglass, pg. 5. The passage is followed by several lists of rules that include  
12 conversion rules for images and conversion rules for HTML documents. *Id.* All of the  
13 listed rules relate to modifying the display. None of the rules suggest that the content of  
14 a web page may be converted by content extraction, or by removing specific desired  
15 hypertext elements relating to data that the user selects for viewing. In addition, none of  
16 the rules suggest creating a document object model from the first hypertext document.

17 In addition, Applicants have amended claims 1, 15, and 20 to recite "a data  
18 mining conversion language comprising a set of methods operable to identify one or  
19 more hypertext elements in the hypertext electronic document." Applicants respectfully  
20 submit that the data mining conversion language as recited in claims 1, 15, and 20 is  
21 not disclosed or suggested in Spyglass Prism. Indeed, the Spyglass Prism makes no  
22 disclosure of any of the content extraction made possible by the use of a data mining  
23 conversion language. For example, a preferred embodiment of the present invention  
24 allows a user the capability to select one or more desired hypertext elements to use in a  
25 customized hypertext electronic document, and the capability to alter the content to a  
26 format suitable for the user. This type of content extraction, as reflected by the example  
27 described in the specification, is not suggested or taught in Spyglass Prism. See  
28 Specification, pg. 5.

29 Applicants respectfully submit that the Examiner has not shown that there is a  
30 suggestion or motivation to modify Spyglass in Spyglass itself to arrive at claims 1, 15  
31 and 20. The Examiner has also not shown that Spyglass teaches or suggests all of the  
32 claim limitations of claims 1, 15 and 20. Applicants respectfully request that claims 1,  
33 15 and 20 are allowable and that the Examiner's rejections should be withdrawn.

1 Claims 2-7, 9-14, 16 and 17 are also allowable as dependent from allowable  
2 independent claims.

3  
4 **IV. Claims 8, 18-19 are not obvious over Spyglass and further in view of**  
5 **Madnick**  
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7 The Examiner rejected claims 8, 18-19 as obvious over Spyglass and further in  
8 view of Madnick. As argued in the April 24, 2002 Office Action Response, Applicants  
9 respectfully submit that the Examiner has not made a prima facie case of obviousness  
10 under § 103(a) because the asserted references are not properly combinable. There is  
11 no suggestion or motivation in the prior art to combine Spyglass with Madnick to arrive  
12 at the claimed invention. Obviousness cannot be established by combining the  
13 teachings of the prior art to produce the claimed invention, absent some teaching,  
14 suggestion or incentive supporting the combination. *ACS Hospital Systems, Inc. v.*  
15 *Monteffore Hospital*, 732 F.2d 1572 (Fed. Cir. 1984). Applicants respectfully submit that  
16 no teaching, suggestion or incentive outside of Applicants' own specification exists to  
17 make the asserted combination.

18 Madnick is directed to a system for querying disparate, heterogeneous data  
19 sources over a network on which at least some of the sources are semi-structured data  
20 sources. See Madnick, Abstract. Madnick provides a system for querying data sources  
21 regardless of whether they are structured (like a SQL data base) or semi-structured (like  
22 a Web page) in a manner that is transparent to the user. Madnick Col. 2, lines 27-42.  
23 Furthermore, Madnick teaches only accessing the data. Madnick does not teach how  
24 the data is displayed or how it is used at all.

25 Spyglass Prism teaches making content from the World-Wide Web ("Web")  
26 displayable on non-Super VGA devices. The objective of Spyglass Prism is content  
27 conversion for a non-traditional display. Spyglass Prism does not teach content  
28 extraction or the selection or specification for selecting data at all. Nor does Prism  
29 suggest any desirability in extracting any content.

30 The Examiner argued in response that:

1 Spyglass Prism and Madnick are properly combinable.  
2 Madnick teaches variables addressed as various symbols. It  
3 would have been obvious to one of ordinary skill in the art at  
4 the time of the invention to apply Madnick to Spyglass Prism,  
5 providing Spyglass Prism an organized way to track various  
6 variables of interest via the use of "&" and "%."

7  
8 Office Action, pg. 15, ¶ 16. The Examiner omits, however, any teaching in Madnick or  
9 Spyglass Prism that would have motivated or provided incentive to one of ordinary skill  
10 in the art to make the asserted combination. For example, the Examiner does not  
11 identify any teaching in Spyglass Prism that suggests any desirability or benefit to  
12 "tracking variables of interest via the use of "&" and "%."

13 Although claims 8, and 18-19 are allowable as dependent from allowable  
14 independent claims 1 and 15, Applicants respectfully submit that neither Madnick nor  
15 Spyglass suggest any desire, need or incentive for combining Madnick with Spyglass to  
16 arrive at the claimed invention. Withdrawal of the Examiner's obviousness rejections of  
17 claims based on Madnick and Spyglass is respectfully requested.

18 **CONCLUSION**

19 Applicants therefore respectfully submit that all pending claims 1-20 are  
20 allowable and request that the rejections to those claims be withdrawn. If any questions  
21 or issues remain, the Examiner is invited to immediately contact the undersigned  
22 attorney, Enrique Perez, at his direct dial number (312) 913-2104.

23 Respectfully submitted,

24  
25 McDONNELL BOEHNEN  
26 HULBERT & BERGHOFF  
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30 Date: Sept. 27, 2002

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1. (Amended) In a first network with a plurality of network devices connected to a second network with a plurality of network devices, a method of content conversion for display on a first network device on the first network, comprising the following steps:

- receiving a first hypertext electronic document on a second network device on a first network, from a third network device on a second network;
- creating a document object model from the first hypertext electronic document;
- extracting one or more selected hypertext elements from the document object model using one or more content extraction (data mining) expressions from a (data mining)content extraction conversion language comprising a set of methods operable to identify at least one of the one or more hypertext elements in the hypertext electronic document;
- converting one or more extracted hypertext elements using one or more (data mining)content extraction operations from (a) the (data mining) content extraction conversion language; and
- creating a second hypertext electronic document on the second network device including one or more converted hypertext elements.

3. A computer readable medium having stored therein instructions for causing a central processing unit to execute the method of Claim 1.

1 4. The method of Claim 1 wherein the step of extracting one or more selected hypertext  
2 elements includes saving references to selected hypertext elements in a symbol table.  
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1 5. The method of Claim 1 wherein the step of creating a document object model  
2 includes saving hypertext elements in a hierarchical model used to represent the first  
3 hypertext electronic document.  
1

1 6. The method of Claim 1 wherein the step of extracting one or more selected hypertext  
2 elements from the document object model using one or more (data mining) content  
3 extraction expressions from a (data mining) content extraction conversion language  
4 includes extracting one or more hypertext elements from one or more other hypertext  
5 electronic documents.  
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1 7. The method of Claim 1 wherein the step of converting one or more extracted  
2 hypertext elements using one or more (data mining) content extraction operations  
3 includes referencing one or more converted hypertext elements in a hypertext template  
4 used to create the second hypertext electronic document.  
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1 8. The method of Claim 1 wherein the step of converting one or more extracted  
2 hypertext elements using one or more (data mining) content extraction operations  
3 includes replacing one or more extracted hypertext elements with a prefix including the  
4 characters "&%" to indicate an extracted hypertext element is a (data mining) content  
5 extraction conversion variable.  
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1 9. The method of Claim 1 wherein the second network device is a content converter and  
2 the third network device is an electronic document server.  
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1 10. The method of Claim 1 wherein the second network is the Internet or an intranet.



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1 11. The method of Claim 1 wherein the one or more (data mining) content extraction  
2 expressions include object-oriented methods for any of: obtaining a hypertext electronic  
3 document type; obtaining all elements in a document; obtaining the nth-number element  
4 in a list; obtaining elements with a specified tag; obtaining one or more attributes of an  
5 element; obtaining one or all rows in a table; obtaining one or all cells in a table row;  
6 obtaining one or all areas in an image map; obtaining one or all sub-elements in a form;  
7 for obtaining one or more options in a form-select list; or for obtaining additional sub-  
8 elements for a selected element.

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1 12. The method of Claim 1 wherein the step of extracting one or more selected  
2 hypertext elements from the document object model using one or more (data mining)  
3 content extraction expressions includes extracting one or more selected hypertext  
4 elements using a conversion script including one or more (data mining) content  
5 extraction operations.

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1 13. The method of Claim 1 wherein the step of converting one or more extracted  
2 hypertext elements includes converting one or more original hypertext elements into  
3 one or more converted hypertext elements, one or more original hypertext element  
4 attributes into one or more converted hypertext element attributes, or adding one or  
5 more new hypertext element attributes.

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1 14. The method of Claim 1 wherein the step of creating a second hypertext electronic  
2 document on the second network device including one or more converted hypertext  
3 elements includes creating a second hypertext electronic document from a hypertext  
4 template used to store one or more hypertext elements from the first hypertext  
5 electronic document.

1

1 15. In a first network with a plurality of network devices connected to a second network  
2 with a plurality of network devices, a method of content conversion, comprising the  
3 following steps:

4 receiving a request for first hypertext electronic document on a  
5 second network device on a first network from a first network device on  
6 the first network;

7 obtaining the first hypertext electronic document from a third  
8 network device on the second network device;

9 applying a (data mining) content extraction conversion language  
10 comprising a set of methods operable to identify one or more hypertext  
11 elements in the hypertext electronic document, the content extraction  
12 conversion language operable to convert one or more original hypertext  
13 elements from the first hypertext electronic document into one or more  
14 converted hypertext elements;

15 creating a second hypertext electronic document from the one or  
16 more converted hypertext elements; and

17 sending the second hypertext electronic document to the first  
18 network device in response to the request for the first hypertext electronic  
19 document.

1 16. A computer readable medium having stored therein instructions for causing a  
2 central processing unit to execute the method of Claim 15.

1 17. The method of Claim 15 wherein the first network device is a hand-held device, the  
2 second network device is a content converter and the third network device is an  
3 electronic document server.

1 18. The method of Claim 15 wherein the step of applying a (data mining) content  
2 extraction conversion language includes creating one or more converted hypertext

elements with a prefix including the characters "&%" indicating the converted hypertext elements are (data mining) content extraction conversion language variables.

19. The method of Claim 15 wherein the step of creating a second hypertext electronic document from the one or more converted hypertext elements includes substituting content from the first hypertext electronic document into one or more converted hypertext elements having a prefix including the characters "&%".

20. A content conversion system, comprising in combination:

a content converter for converting a first hypertext electronic document into a second hypertext electronic document using a data mining conversion language;

a document object model for storing hypertext elements of a first hypertext electronic document;

a proxy server for communicating with a plurality of network devices making requests for first hypertext electronic documents, for communicating with a context converter and with a plurality of content servers on a network providing first hypertext electronic documents;

a (data mining) content extraction conversion language comprising a set of methods operable to identify one or more hypertext elements in the hypertext electronic document, (with) a plurality of (data mining) content extraction conversion expressions and a plurality of (data mining) content extraction conversion operations for converting a plurality of original hypertext elements into a plurality of converted hypertext elements.